

THE NEXT GENERATION IN EXIT SIGNS



Ecoglo Hybrid signs are ideal in situations where ambient light is poor or irregular

Following three years of research and development, Ecoglo International – the New Zealand-based global specialist in photoluminescent signage – is about to release its next-generation, hyper-efficient ‘hybrid’ exit sign series, developed especially for the Australasian commercial building market.

Ecoglo International has won worldwide recognition for its slim-line photoluminescent (PL) exit signs that glow in the dark for hours using energy harnessed from surrounding light.

PL signage, suitable for all commercial-grade buildings including healthcare, educational, industrial and office complexes, is a technologically advanced alternative to conventional exit signage, which typically consists of a translucent box fitted over a powered light bulb or similar light source, along with a back-up battery in case of power outage.

In their simplest form, PL signs are completely ‘passive’ – no electrical connections or back-up batteries required!

In places where ambient light is poor or irregular, such as internal corridors or stairwells, a small array of LEDs above the

PL sign provides the ongoing energy required to charge the PL panel. This sort of PL sign is known as a ‘hybrid’ because it can derive energy from both ambient light and its own LEDs... and it is this class of exit sign that Ecoglo has revolutionised through its latest research and development program.



Ecoglo passive PL signs using energy harnessed from surrounding light

New Electronics

Ecoglo's new hybrid exit sign sets new standards in terms of its simplicity, enhanced reliability and energy efficiency, as well as unrivalled life expectancy: this is great news not only for building occupants, but also for facility managers who are required by law to ensure that all signage is always in perfect working order.

Developed in conjunction with consultant electrical engineer Roger McKenzie, from R2B2 Engineering in Christchurch, New Zealand, the heart of the new sign is its innovative circuitry, which was developed with a completely fresh approach. The first step in the development process, McKenzie explains, was to recognise the main advantages of hybrid PL signs over competitors' products, and to then enhance those benefits for even better outcomes.

"We focused on creating the right product for the market rather than just refining existing generic technologies," he says.

"We realised that what customers valued most with their hybrid signs were reliability and a trouble-free, long average lifespan, so that was our starting point. People who invest in PL exit signage don't just want an effective and long-lasting signage product, they also want to minimise the effort involved in maintaining their signage assets.



Ecoglo International's newly developed hybrid exit sign features a range of electronic innovations and offers unrivalled product reliability and energy efficiency.

"By contrast, conventional illuminated exit signs are all about effort: lights and batteries have to be checked routinely, which means maintenance crews are continually accessing high places with lots of safety gear to worry about."

Given the core values of product reliability and superior average lifespan, McKenzie says all components of the new hybrid sign's LED driver circuitry were simplified to function at a fraction of their operating ratings, thereby relieving stress on materials and improving life expectancy.

A major breakthrough was the decision to abandon 'one size fits all' universal components. "Universality might be appropriate in the circuitry of a portable device like a laptop, but a fixed hybrid sign installed in a single location does not require universal functionality, which only adds unwanted complexity to the circuitry," McKenzie says.

Another decisive feature of the new circuitry relates to light output: conventional circuits try to regulate light output, "whereas we allow the light to vary and in doing so have less circuitry."

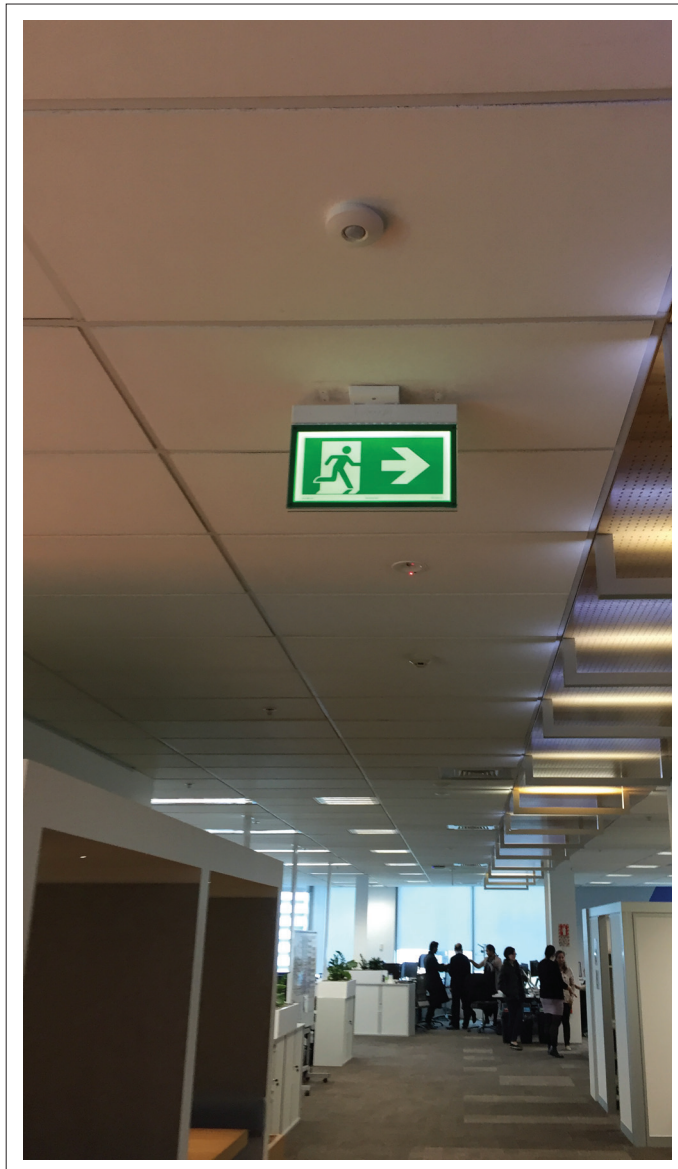
This emphasis on targeted, product-specific design attributes is equally evident in the hybrid circuitry's ability to withstand transient conditions, as can occur during natural events like lightning strikes. (Such events can quickly degrade the life expectancy of a product.) This protective feature, McKenzie adds, is subject to a patent application, underscoring the originality of the design.

The new circuitry delivers outcomes that truly matter to customers: a whopping 200,000-hour average lifespan – more than double that of its predecessor – and a warranty of 10 years. "We estimate that our sign will have 15% of the failure experienced by our closest competitor," McKenzie asserts.

New Sign Design

The new Ecoglo hybrid exit sign features not only freshly designed circuitry, but also an entirely revised physical panel design.

According to Ecoglo's Technical Manager, Mark Watson, the new hybrid exit sign has been resized to accommodate the specific minimum requirements of New Zealand and Australian applications. "The other thing we have reworked is the installation interface; the new sign is a lot more user-friendly for electricians," he says.



Groundbreaking Efficiency

Taking into account both the new circuitry and revised panel characteristics of the new hybrid sign, the result is an incredibly energy-efficient device that uses just 0.5W of power. This represents a better-than-fourfold improvement over its predecessor.

"It also reinforces how energy-efficient our PL hybrid signs are compared with conventional illuminated products, which can use up to 5W," Watson notes. "Savings in energy costs are meaningful, of course, but reduced greenhouse gas emissions are an equally powerful consequence of the energy efficiency we've been able to achieve." Ecoglo's Executive Director, Mike Dimond, says the new hybrid exit sign, due to replace existing models in 2021, will be available in two configurations: a single-sided model (HYU1.2) and double-sided model (HYU2.2).

Ecoglo has grown to become an international leader in the field of emergency visibility products

"Ecoglo has grown to become an international leader in the field of emergency visibility products through non-stop innovation and research and development over the company's 23-year history," Mike says. "Our new hybrid exit sign is the latest expression of our commitment to original design."

"The best innovation is always a team enterprise – we are grateful not only to Roger McKenzie for his stellar contributions, but also to the New Zealand government's industrial development support agency, Callaghan Innovation, which contributed funding towards the project."



The canopy of the new model housing the wiring and other components can be recessed into the ceiling.

Ecoglo International PL emergency exit signs are available worldwide and meet or exceed all relevant international building and compliance code requirements.

For more information visit

ecoglo.com.au in Australia
or **ecoglo.co.nz** in New Zealand.

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